



PATENTS  
1:2056-0037  
P01-1029

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re The Application of: )  
Anthony F. Aiello et al. )

Serial No.: 10/092,007 )

Examiner: Christopher S. McCarthy

Filed: March 6, 2002 )

Art Unit: 2113

For: SYSTEM AND METHOD FOR )  
MULTIPATH I/O SUPPORT )  
FOR FIBRE CHANNEL DE- )  
VICES )

Cesari and McKenna, LLP  
88 Black Falcon Avenue  
Boston, MA 02210  
December 21, 2005

"Express Mail" Mailing-Label Number: MAILINGLABELNUMBER.

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

DECLARATION UNDER 37 C.F.R. §1.131 OF CO-INVENTORS ANTHONY F.  
AIELLO AND RADEK ASTER

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### PURPOSE OF DECLARATION

This declaration is to establish completion of the invention of this application in United States, a WIPO country, at a date prior to May 7, 2001, that is the estimated effective date of the prior art publication, US Patent No. 6,883, 108 that was cited by the examiner.

We, Anthony F. Aiello and Radek Aster, declare on the basis of personal knowledge as follows:

1. We are the inventors of the subject matter of the present patent application.
2. At all relevant times, we have been employed by Network Appliance, Inc. and/or under an obligation to assign the present patent application to Network Appliance, Inc., 495 East Java Drive, Sunnyvale, CA 94089.
3. We understand that certain claims of the present application stand rejected under U.S. Patent No. 6,883,108 to Lee et al., which was filed on May 7, 2001, less than 10 months before the filing date of the present application.
4. As set forth herein, the subject matter claimed in the present application was conceived by us within the United States before May 7, 2001. Furthermore, since a date earlier than May 7, 2001 through at least March 6, 2002, the filing date of the present application, we diligently pursued a reduction to practice of the invention.

### CONCEPTION

5. Attached hereto as Exhibit A is a true and correct copy of a detailed invention report, prepared by us, entitled "NetApp New Invention Report" that demonstrates con-

ception of the invention prior to May 7, 2001. The actual dates of Exhibit A have been whited-out.

6. In particular, the summary and advantage sections of Exhibit A, among others, demonstrate that we had conceived of a system and method for multiple path I/O support for fibre channel devices.

#### DILIGENCE

7. During the time from before May 7, 2001 until at least March 6, 2002, we diligently worked on preparing a patent application directed to the present invention. Specifically, we provided detailed information of our invention to our patent attorneys, and reviewed and commented upon one or more drafts of the patent application that was filed on March 6, 2002.

8. On March 6, 2002, the present patent application, which has been assigned Application Serial No. 10/092,007, was filed with the United States Patent and Trade-mark Office.

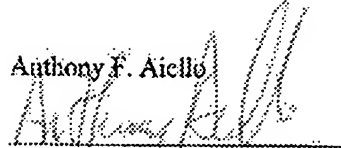
9. As a below named inventor, I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under §1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of any patent that might issue on the present application.

PATENTS  
112056-0037  
P01-1029

Name:

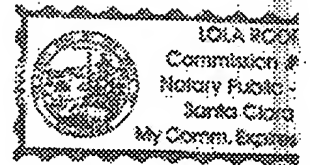
Anthony F. Aiello

Signature:



Date:

1/25/06

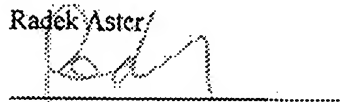


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Name:

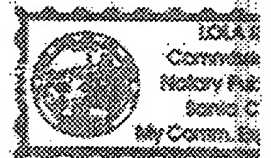
Radek Aster

Signature:



Date:

1/16/2006



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# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Santa Clara

ss.

On Jan 16, 2006

before me,

Lola Rodriguez

Name and Title of Officer (e.g., "Notary Public, Notary Public")

personally appeared

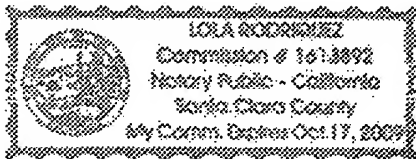
Radek Aster

Name(s) of Signer(s)

re: PO# 1029 Declaration under 37 CFR 1.131

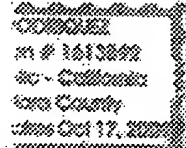
☐ personally known to me

☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Lola Rodriguez  
Signature of Notary Public



Printed Name and Title

## OPTIONAL

Though this information below is not required by law, it may prove valuable in persons relying on the document and could prevent fraudulent removal and replacement of this form to another document.

### Description of Attached Document

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_

Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

### Capacity(ies) Claimed by Signer(s)

Signer's Name: \_\_\_\_\_

- ☐ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — ☐ Limited ☐ General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

Signer's Name: \_\_\_\_\_

- ☐ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — ☐ Limited ☐ General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

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# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Santa Clara

ss.

On Jun 25, 2006

before me,

Lola Rodriguez

(Name and Title of Officer (e.g., "Jane Doe, Notary Public"))

Personally

appeared

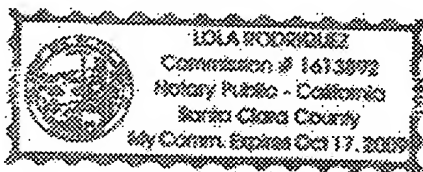
Anthony F. Arredo

(Name(s) of Signer(s))

RE: Pol-009 Declaration under 37 C.R.C. 1131

☐ personally known to me

I proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Lola Rodriguez  
(Signature of Notary Public)

## OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on this document and could prevent fraudulent removal and reattachment of this form to another document.

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☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

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☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer is Representing: \_\_\_\_\_

- 37



## NetApp New Invention Report

Legal Department Use Only

Docket No.: P01-1029

Date Received:

Report Date: [REDACTED]

Report By: Tony Aiello x6515, Radek Aster x6527

(contact name; telephone number)

Title of the Invention (3-10 words):

Multipath I/O support for Fibre Channel Devices.

Project/Product Name: VB

Business Group: Engineering, Storage SW

Instructions: Fill in this form to the best of your ability, starting with the above box. Submit the completed form by email or hardcopy directly to [Gary.Ross@NetApp.com](mailto:Gary.Ross@NetApp.com) of the NetApp Legal Department. Later, you may be asked to sign a hard copy for our records. Questions? Email or call Gary at 408/822-3138.

**1. SUMMARY OF THE INVENTION:**

Give a brief summary of the invention and what it does.

This provides for physical fault tolerance between some compute system and Fibre Channel attached storage devices. There is a class of error conditions that can result in failure of the communication path. By providing more than one path to a Fibre Channel attached device, the compute system can continue to transfer data between itself and the Fibre Channel attached storage even if a communication path suffers a catastrophic failure.

**2. BACKGROUND OF THE INVENTION:**

What problems does the invention solve? If you know of any prior approaches to these or similar problems, please describe them. Why were those prior approaches inadequate? If you know of any patents, articles, publications, conferences, seminars, or products (NetApp's or competitors'), which attempted to address these or similar problems (or which may be otherwise relevant to the invention), please identify them.

[REDACTED] A'

This addresses the class of errors or events that cause failure of communication between a compute system and Fibre Channel attached storage. Fibre Channel is a token-ring protocol. Each node participates in each transaction at least to the point of buffering and retransmitting data. Should any node fail to perform this task, the ring is broken.

In addition to the failure conditions generated by any Fibre Channel device, physical interconnects can also cause a break of this token-ring. A bad cable between two points leads to the same catastrophic failure.

### 3. DESCRIPTION OF THE INVENTION:

Describe\*\* in detail the "best" implementation (usually, the latest version) of the invention with reference to illustrative figures or diagrams. Also describe the system in which it can be incorporated, and alternate ways of implementing it, if any. Describe not only the invention's functional components or steps, but also how they operate. For example,

- For hardware, describe the major functional components with reference to block diagrams and how they inter-operate.
- For circuits, include schematics.
- For a process, describe the critical steps in the workflow with reference to block diagrams.
- For computer programs, provide flow charts of the key functions and procedures, and describe the computer platform for which they were written.
- For a specific signal or data format, describe its fields with reference to a block diagram.

Attach additional pages, as necessary.

\*\* NOTE: If an existing document, e.g., from the Engineering Design Depot, provides the required information, please simply attach it to this report (preferably, in electronic form) or provide a pointer. There is no need to restate the content, though you may need to augment it for this report. If the document is lengthy, please identify the relevant portions.

These are described in detail using the following design documents

The design of the Routing Administrator

The design of the Adapter Driver

The design of the Disk Class driver

The design of the SCSI translator

### 3. ADVANTAGES OF THE INVENTION:

Describe any technical benefits or competitive advantages provided by the invention. What aspects of the invention do you regard as clever or novel? This is your chance to "sell" the invention.

This addresses the fundamental problem of a token-ring architecture like Fibre Channel. The benefits of this invention are twofold. First and primarily, it protects against the single points of failure that are disk drives, cables, interconnects, etc. Secondly, it provides a means of enabling online repair of such defective components. Since there is more than one path to a device, a component failure can be dealt with without requiring the compute system to be brought down.



**5. Important Information**a. About when was the invention conceived? Feb 2000b. Was the invention ever disclosed to another company? Yes ☐ No ☒

If so, when? \_\_\_\_\_

Who was it disclosed to? \_\_\_\_\_

Was there an NDA in place? Yes ☐ No ☐

If not yet disclosed, when will such disclosure first take place. \_\_\_\_\_

c) Has/Will the invention been incorporated in a NetApp product? Yes ☒ No ☐Product Name: VBHas this product been offered for sale or publicly used? Yes ☐ No ☒ Don't know ☐

If so, when? \_\_\_\_\_

If you don't know, who would? \_\_\_\_\_

d) If the invention is a process, has it been used commercially? Yes ☐ No ☐

If so, when did such use start: \_\_\_\_\_

If you don't know, who would? \_\_\_\_\_

e) Is the invention scheduled for publication in any journal or

for presentation at any conference or tradeshow? Yes ☐ No ☒

If so, when: \_\_\_\_\_

If you don't know, who would? \_\_\_\_\_

**6. INVENTORS:**

Provide the following information for each person who "materially contributed" to the invention. *If there are more than two inventors, please provide information for each.*

1) **First Inventor's Name:** \_\_\_\_\_ **email:** \_\_\_\_\_**Post Office Address:** \_\_\_\_\_ **Home phone:** \_\_\_\_\_**Residence (if different):** \_\_\_\_\_ **Work phone:** \_\_\_\_\_

Country of Citizenship: \_\_\_\_\_ Work fax: \_\_\_\_\_

Manager: \_\_\_\_\_

2) Second Inventor's Name: \_\_\_\_\_ email: \_\_\_\_\_

Post Office Address: \_\_\_\_\_ Home phone: \_\_\_\_\_

Residence (if different): \_\_\_\_\_ Work phone: \_\_\_\_\_

Country of Citizenship: \_\_\_\_\_ Work fax: \_\_\_\_\_

Manager: \_\_\_\_\_

*If any of the listed inventors is not employed by the Company, please explain the arrangement.*

This New Invention Report is submitted to an attorney within the NetApp legal department for the purpose of obtaining legal advice as to the availability of patent protection for the described invention and is therefor subject to attorney-client privilege.